

WHAT IS CLAIMED IS

1. A display assembly including a photovoltaic cell and an electro-optical cell arranged in front of said photovoltaic cell and capable of having transparent regions for transmitting incident light to said photovoltaic cell,

5 wherein said photovoltaic cell is arranged to reflect predetermined visible wavelengths of the light transmitted through said electro-optical cell, so that said photovoltaic cell forms a coloured reflector behind said electro-optical cell.

2. A display assembly according to claim 1, wherein said electro-optical cell is a liquid crystal cell.

10 3. A display assembly according to claim 1, wherein said electro-optical cell is of the electrochromic type or the electrolytic type.

4. A display assembly according to claim 1, wherein said electro-optical cell includes means for providing a coloured reflection of the incident light in its non transparent zones.

15 5. A display assembly according to claim 1, wherein the reflection of said predetermined wavelengths is an interferential reflection via a multi-layered reflective filter including a transparent top electrode of said photovoltaic cell.

20 6. A display assembly according to claim 5, wherein said photovoltaic cell includes an inner reflector, formed by a reflective substrate or a bottom reflective electrode, and an active photodiode part formed of semiconductor material having a greater real refractive index than that of said top electrode.

7. A display assembly according to claim 6, wherein said semiconductor material is hydrogenated amorphous silicon.

25 8. A display assembly according to claim 7, wherein said active silicon photodiode part has a thickness comprised between 100 and 600 nm and said top electrode has a thickness comprised between 60 and 300 nm, the pairing of said thicknesses leading to a determined colour of the reflected light.

9. A display assembly according to claim 8, wherein said active photodiode part made of silicon has a thickness comprised between 250 and 450 nm and said top electrode has a thickness comprised between 70 and 150 nm.

30 10. A display assembly according to claim 5, wherein said top electrode is covered with a transparent or slightly diffusing lacquer layer.

11. A display assembly according to claim 10, wherein said lacquer layer contains dyes or pigments.

35 12. A display assembly according to claim 1, wherein said photovoltaic cell includes a semi-transparent metal top electrode forming said coloured reflector.

13. A display assembly according to claim 1, including analogue display members placed in front of said electro-optical cell or between the latter and said photovoltaic cell.

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